

Release notes for ENDF/B Development photoat-012_Mg_000
evaluation

ENDF
B-VII.dev

October 13, 2016

- checkr Warnings:

1. A previous error halted parsing of the current section
MAT=1200, MF= 1, MT=451 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=1200, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      148 TO      165
```

- checkr Errors:

1. A variable is outside the allowed ENDF range
MAT=1200, MF= 1, MT=451 (0): Variable range

```
ERROR(S) FOUND IN MAT=1200, MF= 1, MT=451
MOD =      3 OUT OF RANGE      0 -      1      RECORD NUMBER      148
```

2. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=501 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1200, MF=23, MT=501
SECTION 23/501 NOT IN DIRECTORY      RECORD NUMBER      167
```

3. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=502 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1200, MF=23, MT=502
SECTION 23/502 NOT IN DIRECTORY      RECORD NUMBER      597
```

4. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=504 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1200, MF=23, MT=504
SECTION 23/504 NOT IN DIRECTORY      RECORD NUMBER      784
```

5. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=515 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1200, MF=23, MT=515
SECTION 23/515 NOT IN DIRECTORY      RECORD NUMBER      825
```

6. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=516 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1200, MF=23, MT=516
SECTION 23/516 NOT IN DIRECTORY      RECORD NUMBER      857
```

7. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=517 (0): Directory (b)

ERROR(S) FOUND IN MAT=1200, MF=23, MT=517
SECTION 23/517 NOT IN DIRECTORY RECORD NUMBER 905

8. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=522 (0): Directory (b)

ERROR(S) FOUND IN MAT=1200, MF=23, MT=522
SECTION 23/522 NOT IN DIRECTORY RECORD NUMBER 942

9. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=534 (0): Directory (b)

ERROR(S) FOUND IN MAT=1200, MF=23, MT=534
SECTION 23/534 NOT IN DIRECTORY RECORD NUMBER 1120

10. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=535 (0): Directory (b)

ERROR(S) FOUND IN MAT=1200, MF=23, MT=535
SECTION 23/535 NOT IN DIRECTORY RECORD NUMBER 1146

11. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=536 (0): Directory (b)

ERROR(S) FOUND IN MAT=1200, MF=23, MT=536
SECTION 23/536 NOT IN DIRECTORY RECORD NUMBER 1181

12. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=537 (0): Directory (b)

ERROR(S) FOUND IN MAT=1200, MF=23, MT=537
SECTION 23/537 NOT IN DIRECTORY RECORD NUMBER 1227

13. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=23, MT=538 (0): Directory (b)

ERROR(S) FOUND IN MAT=1200, MF=23, MT=538
SECTION 23/538 NOT IN DIRECTORY RECORD NUMBER 1274

14. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=27, MT=502 (0): Directory (b)

ERROR(S) FOUND IN MAT=1200, MF=27, MT=502
SECTION 27/502 NOT IN DIRECTORY RECORD NUMBER 1366

15. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=27, MT=504 (0): Directory (b)

ERROR(S) FOUND IN MAT=1200, MF=27, MT=504
SECTION 27/504 NOT IN DIRECTORY

RECORD NUMBER 1425

16. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=27, MT=505 (0): Directory (b)

ERROR(S) FOUND IN MAT=1200, MF=27, MT=505
SECTION 27/505 NOT IN DIRECTORY

RECORD NUMBER 1485

17. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1200, MF=27, MT=506 (0): Directory (b)

ERROR(S) FOUND IN MAT=1200, MF=27, MT=506
SECTION 27/506 NOT IN DIRECTORY

RECORD NUMBER 1590

- fudge-4.0 Warnings:

1. generic warning message
reaction label 0: Mg + gamma [coherent] / Product: gamma (Error # 0): Warning

WARNING: coherentScattering is not a valid distribution component for 2-body reaction

2. FIXME: Generic fudge unimplemented message
reaction label 0: Mg + gamma [coherent] / Product: gamma (Error # 2): Generic unimp (c)

WARNING: Checking not yet implemented for pointwise type data

3. generic warning message
reaction label 1: Mg + gamma [incoherent] / Product: gamma (Error # 0): Warning

WARNING: incoherentScattering is not a valid distribution component for 2-body reaction

4. FIXME: Generic fudge unimplemented message
reaction label 1: Mg + gamma [incoherent] / Product: gamma (Error # 2): Generic unimp (c)

WARNING: Checking not yet implemented for piecewise type data

5. Cross sections do not correctly sum up properly according to an ENDF (or equivalent) sumrule
summedReaction label 9: total (Error # 0): Sumrule

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 100.00%

6. Cross sections do not correctly sum up properly according to an ENDF (or equivalent) sumrule
summedReaction label 11: photoelectric absorption (Error # 0): Sumrule

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 84.87%

- fudge-4.0 Errors:

1. Calculated and tabulated thresholds don't agree
reaction label 0: Mg + gamma [coherent] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!
2. 2-body reaction not in center-of-mass frame
reaction label 0: Mg + gamma [coherent] / Product: gamma (Error # 1): 2-body not in COM

WARNING: 2-body reaction not in center-of-mass frame!
3. Calculated and tabulated thresholds don't agree
reaction label 1: Mg + gamma [incoherent] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!
4. 2-body reaction not in center-of-mass frame
reaction label 1: Mg + gamma [incoherent] / Product: gamma (Error # 1): 2-body not in COM

WARNING: 2-body reaction not in center-of-mass frame!
5. Energy range of data set does not match cross section range
reaction label 1: Mg + gamma [incoherent] / Product: gamma / Distribution incoherentScattering - piecewise: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (0.0 -> 1000000000.0) vs (1.0 -> 1e+11)
6. Calculated and tabulated thresholds don't agree
reaction label 2: e- + e+ + Mg [electron field] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2.044e6 eV!
7. Calculated and tabulated thresholds don't agree
reaction label 3: e- + e+ + Mg [nuclear field] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1.022e6 eV!
8. Calculated and tabulated thresholds don't agree
reaction label 4: e- + Mg1s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1294.5 eV!
9. Calculated and tabulated thresholds don't agree
reaction label 5: e- + Mg2s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 89.45999999999999 eV!
10. Calculated and tabulated thresholds don't agree
reaction label 6: e- + Mg2p1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 56.55 eV!

11. Calculated and tabulated thresholds don't agree
reaction label 7: $e^- + \text{Mg}2p3/2$ / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 56.24 eV!
12. Calculated and tabulated thresholds don't agree
reaction label 8: $e^- + \text{Mg}3s1/2$ / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 6.89 eV!
13. Calculated and tabulated thresholds don't agree
summedReaction label 9: total / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!
14. Calculated and tabulated thresholds don't agree
summedReaction label 10: pair product / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1.022e6 eV!
15. Calculated and tabulated thresholds don't agree
summedReaction label 11: photoelectric absorption / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 6.89 eV!